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MILK RIVER WATERSHED NEWS

MAY 1998
VOLUME 1 NUMBER 1

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Welcome to the 1st Edition of the Milk River Watershed News

Much is stirring in the Milk River Basin. As you all know, the Milk River Basin is long and complex and has many interesting water management issues. Montana shares the basin with the Provinces of Alberta and Saskatchewan. Its waters originate in Montana, flow into Alberta and then back across the boundary into Montana. This international river was the stimulus for creating the 1909 Boundary Waters Treaty that divides the waters along the 49th Parallel between Canada and the United States. Its northern tributaries are shared with the Province of Saskatchewan. The Tribes on four Indian reservations (Blackfeet, Rocky Boys, Fort Belknap and Fort Peck) have laid claim to its waters. The basin includes numerous private, state, and federal water projects that irrigate over 130,000 acres, a large wildlife refuge, numerous wildlife enhancement projects, and a multitude of municipalities that depend upon its water. There are also very good water conservation projects being implemented within the basin that we thought you might like to read about. Public interest in water issues has heightened with the ongoing reserved water right compact negotiations with the Fort Belknap tribes as well as the ongoing Milk River adjudication. It seems that everyone in the basin in one way or another depends upon the Milk River.

The purpose of this newsletter, therefore, is three fold: first, to keep you informed of the important issues and activities that could affect you; second, to describe how water is managed in the basin; third, to provide you with some ideas that might be helpful for improving local water management.

Basin residents and agency folks that call themselves the Watershed Education Workshop Planning Committee are responsible for preparing this newsletter. This planning committee was formed to assist in designing the "Know Your Watershed" workshop that is planned for next year (refer to the "Increasing Local Understanding of the Milk River Watershed" article on page 3). Agency partners include the United States Bureau of Reclamation and the Montana Department of Natural Resources and Conservation (DNRC). Our intent is to publish the newsletter quarterly. We welcome any suggestions on how to make the newsletter more interesting and to better serve your needs. Feel free to contact any member of the planning committee if you have ideas suggestions for improvements or articles you want to see published. The list of members is located on the back page of this newsletter. ■

Which dam in the Milk River Basin do you think this is?
(Answer on page 3)

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Increasing Local Understanding of the Milk River Watershed

THIRTY-NINE RESIDENTS OF THE MILK RIVER WATERSHED DONATED A DAY OF THEIR TIME ON JANUARY 8TH TO BEGIN PLANNING A "KNOW YOUR WATERSHED" WORKSHOP FOR AREA RESIDENTS.

Those present included representatives from several irrigation districts, ranchers and farmers, the City of Havre, MSU Extension, Alberta and Saskatchewan, and state and federal agencies. The Blackfeet, Ft. Belknap, Rocky Boys and Fort Belknap reservations were invited, but were unable to attend.

Those present agreed that there is a need for improved understanding of what the Milk River watershed is, how it is used, and the challenges of managing the watershed resources to satisfy all those who rely on them. The group scheduled the "Know Your Watershed" workshop for January of 1999, to allow sufficient time to develop educational resources for this special event.

The Milk River "Know Your Watershed Planning Committee" spent the day accomplishing several tasks: (1) identifying and prioritizing watershed education needs; (2) identifying potential audiences; (3) discussing the benefits of watershed education; (4) considering appropriate educational approaches to reach both youth and adult audiences. The group concluded the meeting by drafting a workshop agenda.

One outcome of the meeting was a plan to develop a stand-alone educational video for the workshop, which could also be used as an enduring resource for youth and adult audiences. A Video Subcommittee was formed to develop the details, including a fund-raising strategy. Cost estimates for production of the video in two phases have been received from several professional video production companies. Subcommittee members are now soliciting funds from a variety of private and public sources. They hope to have the funding in place this spring so that production can begin in summer.

"Know Your Watershed" workshops have been conducted in ten other watersheds across Montana. They are developed through a community-based, collaborative planning process facilitated by staff of the Montana Watercourse. Interested individuals and groups in the Milk River are encouraged to contact Mary Ellen Wolfe at (406)994-1910 The Montana Watercourse is a statewide youth and adult watershed education program located at MSU-Bozeman. ■

Summer Water Supply May Be Tight

THE MILD WINTER IN NORTH CENTRAL MONTANA WILL IMPACT WATER SUPPLIES THIS SUMMER IN THE MILK RIVER DRAINAGE. Mountain and plains snow accumulations were below normal to much below normal. Fortunately, reservoir storage was much above normal last fall for those water users who rely on stored water. The April 1 water supply forecast indicates that the streamflow volume of the Milk River for the April through September runoff period will be only 57 percent of normal. The runoff for the St. Mary River Basin is expected to be higher, ranging between 80 and 85 percent of normal. Since March 16, basin water has been diverted from the St. Mary River Basin to the Milk River. The combined flows from the Milk and the St. Mary rivers have allowed Fresno Reservoir to fill gradually. Fresno water levels are expected to peak at the end of April or early May at about 4 feet below normal full pool. If the basin downstream of Fresno Reservoir does not receive above normal rainfall for irrigation, Fresno Reservoir will be drawn down to possibly 20 feet below normal full pool level by July. Nelson Reservoir east of Malta will also peak in late April or early May and be 2 to 2-1/2 feet below normal full pool.

On April 13, the eight irrigation districts from Chinook to Glasgow that use Milk River water established an irrigation water allotment of 1.5 acre-feet per acre that can be diverted from the river beginning May 1. The irrigation districts and the Bureau of Reclamation contract pumpers rely on the natural flow of the Milk River, stored water in the reservoirs, and water transferred into the Milk River Basin from the St. Mary River. Water users who rely on natural flows only will have little or no water this year, unless above average and timely rains occur throughout the basin. ■

Upcoming Events

Thursday, May 28
Fort Belknap/Reserved Water Right Compact negotiating session — Public meeting
Begins: 9:00 a.m.
2900 4th Avenue North
Billings, MT 59107

June 8-12
Water measurement workshops at Chinook, Malta, & Glasgow
For more information contact: your local irrigation district or Brent Esplin — (406)247-7489

July 16,17,18
Advanced Field Techniques in Ornithology
Co-sponsored by Bowdine National Wildlife Refuge and MSU Northern in Havre. For more information contact MSU Northern

Answer from page 1:
State-owned water project — Frenchman Dam

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Milk River Watershed News is prepared and published by DNRC—Water Management Bureau.

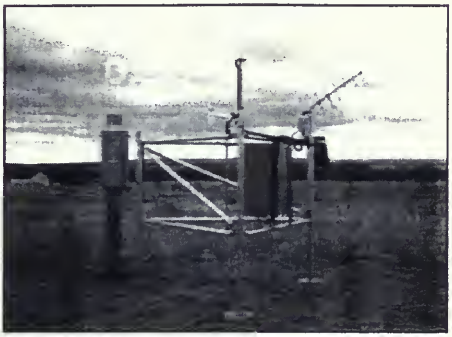
AgriMet Irrigation Water Management

The Phillips Conservation District has recently secured a grant from the Bureau of Reclamation to provide education and locally based information to improve irrigation and crop production in the Milk River Valley. Participation in the Montana AgriMet Irrigation Water Management (IWM) program is voluntary. The program will provide seven-day irrigation schedules based on types of crops grown, soil water holding capacities and stage of crop growth.

Practicing irrigation water management is not new to agriculture. The most recent effort, utilizing weather stations to forecast crop use in combination with weekly soil moisture monitoring, was introduced in the Pacific Northwest in 1983 and has expanded to 65 weather stations throughout Washington, Oregon, California, Idaho, Wyoming, and Montana.

Three weather stations will be located in the Milk River Valley at Harlem, Malta, and Glasgow in 1998. These AgriMet stations will record temperature, solar radiation, humidity, wind speed, wind direction and precipitation every fifteen minutes. The information collected will be transferred every four hours by satellite to the Bureau of Reclamation VAX computers for decoding into crop water use tables. The information will be disseminated on the Internet. In addition, this information, along with weekly soil moisture and water availability data, will then be used by a local field technician to write seven-day irrigation schedules. These schedules will be made available to local newspapers and radio stations for farmers and other irrigators to use.

Irrigation scheduling information can be found on the Bureau of Reclamation Web page. The Internet addresses are: **http://www.pn.usbr.gov/agrimet** for weather stations west of the continental divide or, **http://www.gp.usbr.gov/www/agrimet.htm** for east of the divide.



AgriMet weather station - Malta.

If you are interested in participating in the MT AgriMet IWM program, or would like more information, please contact Debbie Pankratz of the Phillips Conservation District (406) 654-1334, or Brent Esplin of the Bureau of Reclamation (406) 247-7489. ■

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Water Measurement Workshops Designed to Improve Irrigation

by Marvin Cross

Three Water Measurement Workshops were held in Chinook, Malta, and Glasgow between June 9-12 and another held on the Rocky Boy's Reservation, July 21. Brent Esplin, United States Bureau of Reclamation (USBR) civil engineer, explained that, "Irrigators need to know how much water they divert and use before water conservation measures can be improved or implemented." The Milk River workshops were open to the public, but targeted toward Milk River Irrigation District employees and irrigators. The workshop on the Rocky Boy's Reservation was also open to the public but aimed at Rocky Boy's personnel and staffs from the other reservations. Each Workshop consisted of an afternoon in the "classroom" followed by a morning "hands-on"session where the participants applied what they learned by taking actual water measurements and learning how to use the various measuring devices.

The three Milk River workshops were organized by the USBR and Department of Natural Resources and Conservation (DNRC). Instructors at the workshops included: Brent Esplin, USBR civil engineer from Billings, Michael Dailey, DNRC hydrologist/planner from Glasgow; and Marv Cross, DNRC Civil Engineer from Havre. The workshop on the Rocky Boy's Reservation was also sponsored by the Rocky Boy's Water Resources Department and involved Duane Gopher, Environmental Officer and Jay Eagleman, Construction Administrator.

During the classroom sessions, the instructors explained the theory behind water measurement and the proper formulas for calculating ditch or stream flows. This information provided the background for explaining how and when to use the various measuring devices. Devices included weirs, flumes, in-line flow meters, as well as different current meters such as the Marsh-McBirney and one of the more sophisticated acoustic flow meters. A number of these measuring instruments were on display.

During the field sessions, participants had the opportunity to use two different types of current meters. The instructors also demonstrated how to use an in-line flow

Learning to measure flow with a Marsh-McBirney meter.

meter and an acoustic flow meter. The Milk River field measurement sessions were held at the beginning of the Zurich Irrigation District diversion near Chinook, at a drain ditch in the Paradise Valley Irrigation District, at the Bruce Hould Farm, at a lateral ditch in the Malta Irrigation District, and on the Strommen Ranch near Glasgow. The field session on the Rocky Boy's Reservation was held on a tributary of upper Beaver Creek and at a site below Beaver Creek Dam.

Most participants felt that they learned a lot about how to measure ditch and stream flows. The workshops were sponsored as a part of the Water Conservation Field Service Program of the USBR. For further information, please contact Brent Esplin at (406)247-7489. ■

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History of Irrigation Development in the Milk River

by Manson Bailey, Jr.

AS SOMEWHAT OF A HISTORIAN AND HAVING COVERED MILK RIVER AND IRRIGATION ISSUES IN THE PAST, I HAVE BEEN ASKED TO CONTRIBUTE A SERIES OF HISTORICAL ARTICLES DESCRIBING THE RECLAMATION OF THE MILK RIVER BASIN IN THIS NEWSLETTER.

> "It had the color of a cupful of tea with the admixture of a teaspoon of milk."

Soon it will be 200 years since the Milk River received its present name. As the Lewis and Clark Expedition worked its way up the Missouri River in 1805, they came to a river entering from the north. They said "that it had the color of a cupful of tea with the admixture of a teaspoon of milk" so they named it "Milk River".

That same day, Captain Clark climbed to the top of a high butte south from where the Milk entered the Missouri River. From this vantage point he had a panoramic view of the surrounding area. He could look downstream to see where they had come and upstream to where they were going. He could also look up the Milk River Valley as far as or just to what is presently called the Saco Divide.

This high vantage point is called "Milk River Butte" or "Signal Butte" as it was a signal and observation point for the early Indians and U.S. Army troops. Today, it is still called Signal Butte as there is a series of high radio towers and TV translators located there.

Milk River has another name as researched by Bob Saindon, a third generation member of his family in Valley County. Bob is an educator by profession and a noted authority on the Lewis and Clark expedition. (He created a diorama of Lewis and Clark and the Milk River as displayed in the Valley County Pioneer Museum.) Bob found that Lewis and Clark received a map at the Mandan village with the Indian names for various streams. The Indians had named the Milk River the "White River."

Perhaps someone has calculated the many miles this river flows from St. Mary Lake in Glacier National Park to its confluence with the Missouri River.

It is a slow flowing and very crooked river. The grade of the valley only drops one foot to the valley mile. In 1853, Isaac I. Stevens, the Governor of the territory of Washington, received a $40,000 contract to conduct a northern railway survey route which followed the water grade of the Missouri and Milk rivers. This was later followed by Jim Hill's railroad — the Great Northern.

This article, however, is about the development of the Milk River for irrigation. Down through time, different individuals and groups came forth to lead the development of our irrigation.

It is interesting to note who they were and the influences they had. Then as now, the mark of "people knowing people and systems" was of great importance.

Let us rewind our time picture to 1884 to focus on Theodore Roosevelt as he lost his first wife, Alice, and his mother, Martha, within a few hours of each other. Twenty six years old and in weakened health, he came west to North Dakota and established a ranch at Medora near the Montana border.

Rewind the time even further back to pick up big John Willis who ran away from his home in Missouri at age 15 in 1872 with an urge to see the west. By 1879, he came up the Missouri River on a paddlewheel to Fort Benton, Montana and by 1886 became a hunting guide in the mountain valley town of Thompson Falls.

Now, fast forward to 1881. This is the year, the first investigations began to find ways to supplement the low summer flows of the Milk River from its source in Glacier Park. This brings H. H. Nelson into the time picture. He was a large sheep rancher and earth moving contractor from Cascade, Montana. In 1902, he moved his ranch and contracting business to Vandalia, twenty miles west of Glasgow and continued to promote irrigation from the Milk River. He was one of the first "Water Planners" in Montana.

These three and others influenced the development of the Milk River, and I will cover them in future issues. ■

If you would like to contribute an article to this newsletter, have ideas or suggestions for improvements, or wish more information about these articles, please contact any member of the planning committee listed on the back page.

"Know Your Watershed" Workshop Update

by Mary Ellen Wolfe

A small group of Milk River residents have been working hard for the past several months making preparations for a January 1999 "Know Your Watershed" workshop in the Milk River basin.

During June, a MSU video production crew spent nine days along the Milk River in Montana, Saskatchewan, and Alberta taping footage for a video "tour" to be shown at the watershed workshop. The videotaping project included interviews with basin residents and visits to points of interest in both the U. S. and Canada, including irrigation projects, Indian Reservations, Fresno Reservoir and Glacier National Park.

A film crew shooting video for the Milk River Video on Signal Butte south of the confluence of the Milk and Missouri Rivers.

The Milk River "Know Your Watershed" Planning Committee will meet again this fall to finalize plans for the January workshop.

Local sponsors include Walleyes Unlimited, North-Central Stockgrower's Association, and Glasgow Irrigation District. The USBR and DNRC have also provided funding for the project. For more information, contact Mary Ellen Wolfe at the Montana Watercourse, (406) 994-1910.

Things Are Looking Up! A Water Supply Update

by Mike Dailey

A wet June saved what looked to be a very dry season in the Milk River basin. However, as someone recently said to me: "We're only a week away from a drought." Which seemed to be the case as July winded down. June rainfall totals were generally between 3.5 and 5 inches. Some wet spots such as Malta received 7.29 inches, and areas of the Bears Paw Mountains received nearly 9 inches according to the National Weather Service. The welcome rains allowed the irrigation districts to shut down releases from Fresno Reservoir for several weeks. During this time, the Reservoir filled and recovered nicely. Sherburne Reservoir was full and inflows were being passed down stream. Inflows to Nelson Reservoir ceased on July 1 due to the nesting of a piping plover, a federally listed threatened species. Approximately 11,000 acre-feet had been added to storage in Nelson Reservoir between mid-June and July 1st. According to the USBR forecasts, there should be sufficient water to meet the irrigation demands for the remainder of the season for the Milk River Project.

At the August 18th water supply meeting in Malta, the irrigation districts agreed to take water as needed until mid-September, but set an allotment of about 2.3 acre-feet per acre. The USBR announced that they would like to drain Lake Sherburne to clean the accumulation of driftwood and debris from the trash racks on the dam. The water from Sherburne is currently being transferred to Fresno and Nelson Reservoirs. The USBR should have adequate carryover storage of 40,000 to 50,000 acre-feet in Fresno Reservoir at the end of the irrigation season. Carryover storage in Nelson Reservoir will be below normal.

Upcoming Events

September 21 & 22
Rocky Boy "Know Your Watershed" Workshop
Rocky Boy, Montana
Stone Child College Gymnasium
Begins: 8:30 a.m.
For more information contact Duane Gopher
(406) 395-4225
or e-mail to
wetlands@cct.rockyboys.org

September 24
Montana Irrigator/ Operator Workshop
Holiday Inn
Bozeman, Montana
For more information contact Mike Murphy
(406) 458-6487

October 22 (tentative)
St. Mary Diversion Works Tour
For details contact
Richard Long, USBR
Montana Area Office
(406) 247-7307

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New Hydrologist/Planner in Glasgow Regional Office

by Mike Dailey

GLASGOW IS A WELCOME CHANGE AFTER SPENDING THE LAST TWO YEARS IN DENVER, COLORADO. I am Mike Dailey, the new hydrologist/planner in the Department of Natural Resources and Conservation Glasgow Regional Office. I am Brent Esplin's successor.

A little bit about myself. I graduated from high school in Wheaton Illinois in 1979. I spent 1980 to 1984 in the Air Force as a Tower and Antenna Installation and Maintenance Specialist. Since my hitch, I've had more jobs than I can count, but prior to attending college the majority of my jobs involved construction and/or trucking.

In 1989, I qualified for an Illinois Veteran's Grant and attended Northern Illinois University in DeKalb, Illinois (home of the flying corn cob) and received a B.S. in Geology in 1993. Since then, I have worked as a geologist and a hydrologist at the Nevada Test Site for the Yucca Mountain Project and most recently as a geologist for an engineering firm in Golden, Colorado.

I married Lori in 1990 and we have two daughters: Sienna 5, and Megan 3. Lori has a degree in Education from Drake University. She is running Summer Volleyball Camps throughout northeastern Montana and does volunteer work at the Valley County Library. Otherwise, she is a "stay at home" mom. Sienna will be attending kindergarten at Irle Elementary School in Glasgow this fall. I have more interests than time, but hunting and fishing are high on my list.

Mike Dailey

My position with the DNRC involves, but is not limited to, helping Milk River irrigators, assisting in developing and implementing water conservation plans, assisting with water users grant and loan applications, and helping address water efficiency and conservation issues throughout the Milk River Basin. I am also responsible for gathering stories for this newsletter. Newsletter comments, editorials, and contributions are welcomed by all. Anyone with ideas or questions, please call me at (406)228-2561. ■

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"We wish you all a very joyous and safe holiday season"

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Local Residents Plan Milk River Workshop

by Paul Azevedo

What is the Milk River watershed and what does it have to do with your well-being along the Hi-line? Does water management in Glacier National Park, Alberta, or Saskatchewan impact your livelihood in Havre, Malta, or Glasgow? What is the status of tribal reserved water rights negotiations and the basin adjudication process? Are there opportunities for you and your neighbors to shape future water management within the Milk River basin?

You can learn the answers to these and other questions at an upcoming educational workshop entitled, "The Milk River: International Lifeline of the Hi-line." The workshop will be held on **Saturday January 30, 1999** from 10:00 a.m. to 5:00 p.m. in the MSU-Northern Student Union Building located in Havre. The workshop is open to all U.S. and Canadian citizens interested in learning more about present and future management options in the Milk River watershed.

Planning for the workshop was initiated in early 1998 by a group of U.S. and Canadian watershed residents committed to the idea that watershed education is a critical first step in bringing together the diverse groups of water users that live, work, and recreate in the Milk River watershed. The goals of this workshop are to:

- Improve understanding and cooperation among various watershed users;
- Foster awareness of the interconnectedness of water supply, water quality, and water use from the headwaters to the mouth of the river near Nashua; and
- Raise awareness of and support for the public benefits of water projects.

Throughout the planning process, the organizers have stressed that the workshop is not meant to build consensus or resolve current water resource issues. Rather, they have worked toward developing an educational forum where individuals, groups, industries, and public bodies with stakes in the long-term vitality of the watershed would be encouraged to exchange information and to share their visions for the future of the basin.

One of the workshop highlights will be a "video tour" of the watershed produced by MSU-Bozeman. To capture a sense of the diversity and complexity of water uses and management issues within this truly international setting, the video production crew followed the Milk River from its headwaters in Glacier National Park to its confluence with the Missouri river just below Fort Peck Dam. Along the way they conducted interviews with irrigators, local business representatives, tribal representatives, recreationists, and water managers in Montana, Alberta, and Saskatchewan. Other workshop highlights include an historical overview of the watershed and a panel presentation made up of representatives of all the key water user groups in the basin. Workshop participants will also have the opportunity to discuss water management dilemmas with their neighbors on both sides of the border.

For more information, please see the workshop agenda and registration form inserted within this issue of the Milk River Watershed News. ■

Upcoming Events

Saturday, January 30,1999
Milk River Know Your Watershed Workshop
Registration is at 9:30 AM
Student Union Building, MSU-Northern -- Havre, Montana

For more information call: Montana Watercourse (406) 994-6671

DNRC Water Resources Havre Regional Office (406) 265-5516

DNRC Water Resources Glasgow Regional Office (406) 228-2561

US Bureau of Reclamation

January 11-15, 1999
Modern Methods in Canal Operation and Control
Technical Service Center
Denver, Colorado

February 1-5, 1999
Water Management Workshop
Denver, Colorado

Mid to Late February
Flow Measurement Workshop
Denver, Colorado

For more information call: Brent Esplin at (406) 247-7489

If you would like to contribute an article to this newsletter, have ideas or suggestions for improvements, or desire more information about these articles, please contact any member of the planning committee listed on the back page.

Facts about the Glasgow Irrigation Project

by Al Steiner

Editor's Note: We plan to ask each division or district to provide the following information in upcoming newsletters. We appreciate the effort provided by Al Steiner and the Glasgow Irrigation District in putting this information together for us.

GENERAL INFORMATION	
Total Acres:	18,011 acres
Number of farms:	106 farms
Water charge:	$3.00 per acre-foot
Primary Diversion:	Vandalia Dam
Miles of canals, laterals:	Vandalia South Canal is 46 miles long.
Manager:	Allan Steiner
Board Member:	Melvin Novak Lee Cornwell John Lacey
Number of Employees	Full Time: 5 Part Time: 1

QUESTIONS AND ANSWERS ON THE OPERATIONS OF THE GLASGOW IRRIGATION DISTRICT:

Q: How does Glasgow Irrigation District charge water users?
A: The district charges water users on an acre-foot basis. Ditch riders measure the water at the nearest delivery point each day using a Micrometer prop meter and log it on a water ticket. These tickets are delivered to the office and are logged with a statement of usage which is then sent to the user at the end of each month.

Q: How are district taxes collected?
A: The District sends an assessment list to the County Treasurer who includes the district assessment with the property tax assessment statements sent to the users. The treasurer's office collects the taxes and places the money in a the district's Operations and Maintenance (O&M) account.

Q: What types of crops are grown within the district and approximate acreage for each?

A: Barley	355.90 acres
Oats	112.40 acres
Wheat	3,736.79 acres
Alfalfa	5,368.88 acres
Other Hay	2,048.97 acres
Pasture	519.13 acres
Silage	552.40 acres
Other Forage	1,755.50 acres

Question: How does the district ensure a fair distribution of water?
Answer: Each user's water is measured on a daily basis and recorded. In a drought or water short year or when shortages in the basin are anticipated, the water is shut off when the total water allocated to an individual water user is reached. On non-water short years water is delivered on a demand and availability basis. Whether this method is equitable is hard to judge as the variety of crops grown in the district and the need and timing for water for each crop varies.

Question: What is the District's policy when a user is observed wasting water and how is the policy enforced?
Answer: At this point, there is no enforcement policy. The charge of $3.00 per acre-foot basis is generally enough of an incentive not to waste water. However, politely pointing out the fact that a person is using more than his share of water is generally enough to stop the practice. We haven't noticed much water being wasted in the last couple of years.

Relining concrete section of initial reach of Vandalia Canal Diversion with R & B money. Photo on 3/2/92

Question: Please give a brief discussion on the work that was performed under your Rehabilitation and Betterment (R&B) program?
Answer: Some of the program accomplishments include:
1. Replaced 800 feet of concrete lining on the initial reach and installing a hydromet

THE MILK RIVER: INTERNATIONAL LIFELINE OF THE HI-LINE

An Educational Workshop

Saturday, January 30, 1999

MSU Northern Student Union Building ■ Havre, MT

You are invited to attend a day-long educational workshop to expand your knowledge of the Milk River watershed and discuss the key issues with other residents of the region. Designed by a group of residents who are committed to watershed education, the workshop aims to:

- Improve understanding and cooperation among various watershed users;
- Foster awareness of the interconnectedness of water supply, water quality, and water use from the headwaters to the mouth of the river near Nashua; and
- Raise awareness of and support for the public benefits of water projects.

Workshop Agenda (At the time of printing)

9:30-10:00 ***Registration***

10:00-11:00 ***What is the Milk Watershed?***
An overview of the physical systems that make up the Milk River Watershed.
Marvin Miller, MT Bureau of Mines & Geology
Woody Ekegren, MSU Extension Service

11:00-11:30 ***History of the Milk River Watershed***
A brief historical overview of human activities in the watershed.
Leo Brockie, Harlem High School
Mary Ellen Wolfe, Montana Watercourse

11:30-11:50 ***A Video Tour of the Milk River Watershed***

12:00-1:00 ***Lunch***

1:00-2:15 ***How is the Watershed Used Today?***
A water users panel including representatives from all key user groups.
Max Maddox, Irrigator
Lynn Cornwell, Rancher
Anne Boothe, Recreation & Tourism
Pancho Bigby, Ft. Belknap Tribe
Kristi Kline, Municipal Water Use
Kent Gilge, Wildlife & Fisheries
Rob Wiebe and **Ian Franks**, Canadian Water Use

2:15-2:30 ***Break***

2:30-3:20 ***Milk River Dilemma Derby***
Small group activity to pique interest in current issues confronting residents of the Milk River Watershed

3:20-4:35 ***Watershed Management: Issues, Problems and Solutions***
Three informative panel presentations.
Legislative & Regulatory Issues:
Total Maximum Daily Loads (TMDLs) -
Carole Mackin, Dept. of Environmental Quality
Water Rights/Adjudication and Reserved Water Rights Compacts
Barb Cosens, Reserved Water Rights Compact Commission and
Rob Wiebe, Sask Water
Cooperative Water Management:
International Agreement
Norm Midtlyng, USGS and
Russell Boals, Environment Canada
Water Supply Issues:
Aging Infrastructure, Water Supply Augmentation, Water Use Efficiency, and Sharing Shortages
Brent Esplin and **Scott Guenther**, Bureau of Reclamation

4:35-4:50 ***Milk River Dilemma Derby Part II***

4:50- 5:00 ***What's Next for the Milk River Watershed?***
Mary Ellen Wolfe, The Montana Watercourse

Workshop Registration Form

Preregistration Fee: $5.00 ($6.50 Canadian) prior to Monday, January 25, 1999
At the Door: $8.00 ($10.00 Canadian)
Students: $3.00 (Preregistration or at the door)
Kids Under 12: Free
(Registration fee includes refreshments, lunch and all workshop materials)

Please make checks payable to: The Montana Watercourse
Mail registration form and payment to:
Montana Watercourse, P.O. Box 170575,
Montana State University, Bozeman, MT 59717-0575

For more information contact:
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Rob Weibe, Sask Water, Swift Current, Canada ..... (306) 778-8263

Name: _____

Organization: _____

Address: _____

_____

Telephone: _____

Amount Enclosed: $ _____

Sponsors: (At the time of printing)

Glasgow Irrigation District
Paradise Valley Irrigation District
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Harlem Irrigation District
Blackfeet Irrigation District
North Central Montana Stockgrower's Association
Walleye's Unlimited, Fresno Chapter
Hill County Conservation District
Phillips County Conservation District
Valley County Conservation District
Blaine County Conservation District
City of Havre
First State Bank of Malta
Sask Water
Alberta Environmental Protection
Environment Canada
Bureau of Reclamation, Montana Area Office
U.S. Environmental Protection Agency
Montana Department of Environmental Quality
Montana Fish Wildlife and Parks
Montana Watercourse , MSU - Bozeman
Montana Department of Natural Resources & Conservation

station for measuring the water being diverted at Vandalia Dam.
2. A number of areas along the main canal and laterals were lined.
3. Drains were realigned and cleaned with a lift station installed in one drain to reclaim the drain water back into the system.
4. A siphon was installed and the length of canal which was labor intensive to maintain was removed.
5. Prefabricated concrete transitions were constructed making installation of turnouts faster and allowing for replacement of the majority of old leaking turnouts.
6. The purchase of some new equipment such as a drag line and a laser leveler was also made possible.

Question: What tangible benefits came from the R&B program?
Answer: A full-time secretary and other district office personnel were hired. These people are better able to look after the interests of the district by investing and accounting for its money, applying for grants, and, in general, gathering the information needed to allow the board of directors to do a better job of managing the district. A hydromet station was installed to monitor in-stream flows and diversions without having to travel to Vandalia Dam on a daily basis. The new turnouts make measuring the delivery of water to each water user easier and more consistent. The installation of canal liners decreased operational losses due to seepage and mitigated saline problems to the fields adjacent to the canal where seepage was prominent. The equipment purchased through the program is still improving the O&M of the district.

Question: What are future plans and long term and short term goals of the district?
Answer: At this point, the long-term goal is to rehabilitate Vandalia Dam. The dam was completed in 1917. The surface of the dam needs to be refaced to retain its integrity because of the effects of many freeze and thaw cycles over the years. The short-term goals would be to design and utilize existing structures to better measure water throughout the district and for collecting data necessary to determine what and where problems are in the system.

Question: In a sentence, what changes would you like to see take place in the Milk River Basin in the next 10 years?
Answer: I believe that the federal dams and project works and the resulting stored water is a benefit to more than the eight irrigation districts, and as such, other parties could possibly share more of the burden for maintaining these structures. ■

History of the Milk River Basin

Part 2

by Manson Bailey

INTRODUCED IN THE FIRST ARTICLE WERE THREE INDIVIDUALS THAT INFLUENCED IRRIGATION DEVELOMENT IN THE MILK RIVER BASIN. They were: Theodore Roosevelt who established a ranch at Medora, N.D. in 1884; Big John Willis, a hunting guide at Thompson Falls during the same period; and H.H. Nelson, a large sheep rancher, earth moving contractor, and early irrigation planner from Cascade.

In 1886, "Teddy" Roosevelt saw a rocky mountain goat mounted in a taxidermist's window in North Dakota. When he inquired where it had come from, he was told that a hunting guide by the name of John Willis at Thompson Falls had shot it. Being an avid hunter, Roosevelt wrote to Willis requesting a guided goat hunt. John received the hand written letter on fancy stationary which was very hard to read. John had just finished guiding some easterners who couldn't climb a mountain or shoot straight, and he didn't know if he wanted to go out again so late in the fall. He turned Teddy's letter over and wrote on the back, "If you can't shoot any better than you can write, I don't think so." This letter now rests in the Roosevelt Memorial Museum in New York.

Finally, they made arrangements for the hunt. Roosevelt traveled by train across Montana with his ranch foreman who tended camp. Big John was there to meet them. Teddy climbed down from the train dressed in a corduroy knickers suit, squash hat, glasses, and a smile full of teeth. John

Web Sites to Bookmark

The Internet is a huge information bank and finding what you are looking for can be time consuming and frustrating. Provided below is a list of web sites that relate to the Milk River Basin and Montana.

United States Bureau of Reclamation Great Plains Region
www.gp.usbr.gov
This site contains information regarding USBR activities. Click on Water Supply Management to access Agri-met and Hydromet data.

Natural Resource Information System
http://nris.mt.gov
This site contains hundreds of GIS maps that can be downloaded for free. This site also contains information on groundwater programs, the volunteer water monitoring program, and many additional links. More information is available per request, although, there may be a fee associated with it.

United States Geological Survey
http://montana.usgs.gov
This site contains current stream conditions, various water use information and water reports.

Montana Online
www.mt.gov
Provides access to information regarding State government, education, employment opportunities, education, and announcements.

Montana Department of Natural Resources and Conservation Home Page
www.dnrc.state.mt.us
Provides Access to various DNRC activities and information including grants and loans, water rights, news and events, and water resource information. The DNRC Water Resource Regional Offices have online computers available for public use.

The Weather Channel Homepage
www.weather.com
Provides the latest weather forecasts for any city including current weather maps.

Happy surfing!

Planning Committee

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thought to himself, " I'll run him off the mountain in the first day" and was determined to do so. The little man had beautiful rifles and was a good conversationalist. John was tough on him during the hunt, but Teddy climbed as fast and hard as John and was able to shoot his goat. He won John Willis over as a friend and they hunted together at different times in Canada and other places. Both men were good for each other. It was said that John made a man out of Teddy, and Roosevelt refined Big John's demeanor. Teddy even introduced John to some good books.

U.S. history is full of the many accomplishments of Teddy Roosevelt. He lead his Rough Riders up San Juan Hill in the Spanish-American War, and became Governor of New York, Vice President under President McKinley and then President of the United States when McKinley was assassinated on September 14, 1904. During this time, Big John Willis moved to Big Dry Creek southeast of Glasgow (now a part of the Big Dry Arm under Fort Peck Reservoir) and began ranching. On Roosevelt's presidential campaign trip around the country, he stopped in Helena and addressed the crowd from the back of the train. At the end of his speech he called out, " Is Big John Willis in the crowd?" John was there and he went up and greeted his old friend and reaffirmed their friendship.

It was during this time that the Reclamation Services, now the U.S. Bureau of Reclamation, started to reclaim western waters for irrigation development. There was a general perception in the U.S. Congress that water projects were critical for the settlement of the West. When John Willis arrived back in Glasgow from Helena, he told his friends that he had met with Teddy Roosevelt. The local water resource promoters were pleased. Partially because of his special relationship with Roosevelt, the Milk River Project was authorized by the Secretary of the Interior on March 4, 1903. In the Valley Country News, April 29, 1904, it states, "engineers arrived this week to start work near Dodson. This will be the beginning of the Milk River Irrigation System." In the same article, it states that one problem that must be solved before beginning the rest of the work is where to locate a dam on the Marias River. It was decided to adopt the Marias Diversion Project. The water from St. Marys Lake would be conveyed to a point on the Marias where a dam would be constructed. This stored water would then be diverted into Big Sandy Creek which empties into the Milk River at Havre. As we all know, this plan was never developed.

In the next installment, I will describe the important role H.H. Nelson played in developing the Milk River Project. ■

[Correction Note: In the last issue it should have been 1891 (not 1881) when the first investigation began to assess ways to improve water supplies in the Milk River Basin.]

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